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*II. An Experiment, to shew the cause of the descent of the Mercury in the Barometer in a Storm. By Mr Francis Hauksbee.*

**I**N the late Violent Storm or Hurricane of Wind, it was observable that the *Mercury* in the Barometer did not only considerably subside, but upon Extraordinary Gusts a Visible Vibration of the Quicksilver appear'd. And for satisfaction of the Curious, That High Winds are capable to lessen the Pressure of the Atmosphere, an Experiment has lately been Devis'd, and made at a meeting of the Royal Society at Gresham-Colledge, April the 12th, 1704. by Mr Fra. Hauksbee, giving a Demonstration of this Phenomenon. A Description of which take from the Delineation, Fig. 12. The Recipient .A. containing about 5 quarts, having about 3 or 4 times its Natural quantity of Air comprest in it by the Syphon, B. B. Which for that purpose is screw'd on at the Bottom within the side of the Basin C. The Stop-cock .D. being turn'd, and the Syphon taken off, a small Swan-neck Pipe .E. is screw'd on in its place. The nose of which fits into a Brass Socket, which is fixt in a Cubical piece of Wood .F. right against the Horizontal pipe .G. From the same Cubical piece .F. arises a Naked Barometer .H. H. whose Cistern lyes open to the passage which leads from the Swan-neck Pipe to the Horizontal Tube aforesaid. Likewise from the same Piece .F. proceeds another Pipe or Tube parallel to the Horizon distinguish'd by .I. leading to another Cubical Piece of Wood .K. 3 foot distant from the former : Out of which likewise ariseth another Barometer .L. L. whose Cistern is also open to the Horizontal Tube .J. and by that means hath Communication with the open

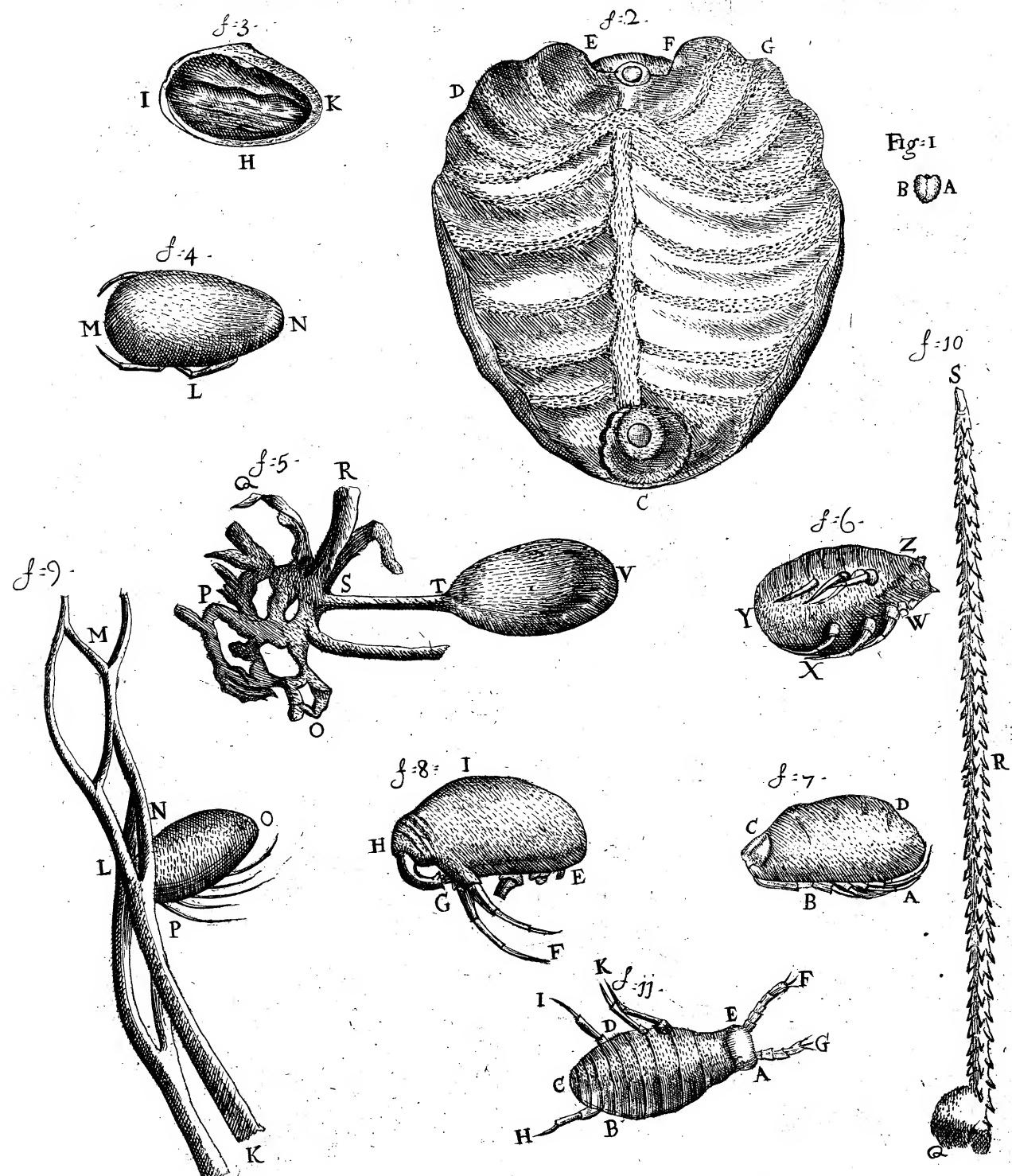
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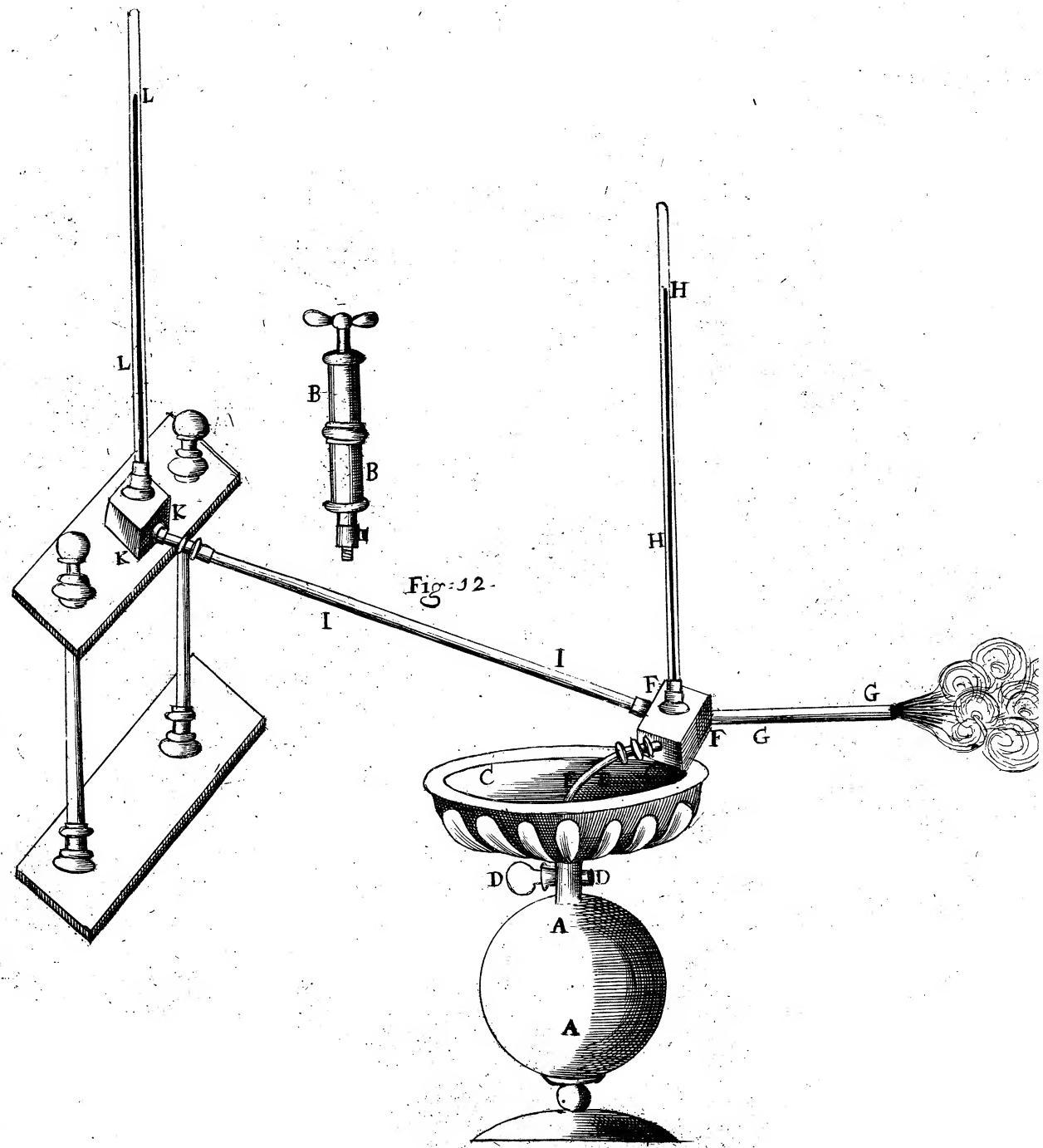
open Cistern of the other. The Parts thus dispos'd, and the Stop-cock being turn'd, the Condens'd Air proceeds strongly thro' the Swan-neck Pipe, which discharges it into the Horizontal Tube .G. Whose Currency so lessens the Pressure of the Atmosphere upon the Cisterns of the respective Barometers as to cause the Mercury to descend 2 inches at least. And 'tis observable, That that Barometer which is 3 foot distant from the Current Air is equally affected, and subsides parallel with the other. Likewise it is to be noted, that as the Current Air is weakned in its force, so doth the Weight of the Atmosphere again Encrease, and the Mercury in the Barometers gradually Ascend.

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III. *An Account of some Eclipses of the Sun and Moon, observed by Mr Tho. Brattle, at Cambridge, about four miles from Boston in New-England, whence the Difference of Longitude between Cambridge and London is determin'd, from an Observation made of one of them at London. By J. Hodgson.*

ON the 12th of June 1694. in the morning I went to the Colledge at Cambridge, about 4 miles from Boston, and observed, with the Brass Quadrant there, with Telescopick Sights, the Rays of the Sun being transmitted through one of the said Sights, on a clean Paper, pasted on a plain piece of Board, and fastned at right angles at about a foot distance from the said Sight, on which Paper I had drawn a Circle between 2 and 3 Inches Diameter equal to the Suns disk, and within that several Concentrick Circles dividing the Diameter into 24 equal





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